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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,011	03/30/2001	Tao Chen	010008	6738

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Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
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EXAMINER	
LELE, TANMAY S	

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/823,011	CHEN ET AL.	
	Examiner	Art Unit	
	Tanmay S Lele	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12 November 2003 has been entered.

Specification

2. Again it is noted that the disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code (as an example, page 3, paragraph 10). Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

3. The disclosure is objected to because of the following informalities: "sun-channel" (assumed to be sub-channel on page 24, paragraph 0045). Appropriate correction is required.

Response to Arguments

4. Applicant's arguments with respect to claims 1 – 30 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1 – 3, 8, 16 – 18, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palenius (Palenius, US Patent No. 6,512,750) in view of Park et al. (Park, US Patent No. 6,480,481).

Regarding claims 1 and 16, Palenius teaches of a method and system comprising, comprising: determining duty cycle of data frame transmissions (column 7,lines 40 – 52); controlling power level based on said determined duty cycle (column 7,lines 40 – 52).

Palenius does not specifically teach of a dedicated control channel for maintaining a traffic data call between a user and a destination or of said dedicated control channel (though it should be noted that Palenius does teach of a CDMA and these concepts are common to such systems).

In a related art dealing with spread spectrum mobile communications systems, Park teaches of a dedicated control channel for maintaining a traffic data call between a user and a destination or of said dedicated control channel (Figures 5A – D and column 5, lines 32 –38 and column 5, lines 50 – 55).

It would have been obvious to one skilled in the art the time of invention to have included into Palenius' power control system, Park's channel structure, for the purposes of bi-lateral communications that minimize interference and resynchronization, as taught by Park.

Regarding claims 2 and 17, Palenius in view of Park, teach all the claimed limitations as recited in claims 1 and 16. Both Palenius and Park further teach of further comprising: comparing said determined duty cycle against a duty cycle threshold (Palenius: column 7,lines 40 – 52 and Park: column 12, lines 18 –33); wherein an adjustment for controlling power level

via said controlling is based on said comparing (Palenius: column 7, lines 40 – 52 and Park: column 12, lines 18 –33).

Regarding claims 3 and 18, Palenius in view of Park, teach all the claimed limitations as recited in claims 1 and 16. Palenius further teaches of further comprising: informing a mobile station of said determined duty cycle (column 7, lines 60 – 67).

Regarding claims 8 and 23, Palenius in view of Park, teach all the claimed limitations as recited in claims 1 and 16. Park further teaches of wherein said communication channel is a dedicated control channel (Figures 5A – D and column 5, lines 32 –38 and column 5, lines 50 – 55).

7. Claims 4, 5, 9, 10, 19, 20, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palenius (Palenius, US Patent No. 6,512,750) in view of Park et al. (Park, US Patent No. 6,480,481) as applied to claims 1 and 8 above, and further in view of Tiedemann (Tiedemann, WIPO No. W/O 99/13675).

Regarding claims 4 and 19, Palenius in view of Park teach all the claimed limitations as recited in claims 1 and 16. Palenius in view of Park do not specifically teach of wherein said controlling comprises of selecting a code channel to pilot channel power ratio for controlling power level of said communication channel.

In a related art dealing with centralized power control, Tiedemann teaches of wherein said controlling comprises of selecting a code channel to pilot channel power ratio for controlling power level of said communication channel (page 12, lines 12 – 35).

It would have been obvious to one skilled in the art at the time of invention to have included into Palenius and Park's power control system, Tiedemann's ratio, for the purposes of

optimizing and improving the performance of a CDMA system in respect to various facets (multi-carrier environments, soft handover, ect), as taught by Tiedemann.

Regarding claims 5 and 20, Palenius in view of Park and Tiedemann teach all the claimed limitations as recited in claims 4 and 19. Tiedemann further teaches of comprising: informing a mobile station of said selected code channel to pilot channel power ratio (page 12, lines 12 – 35).

Regarding claims 9 and 24, Palenius in view of Park teach all the claimed limitations as recited in claims 8 and 23. Palenius in view of Park do not specifically teach of wherein said controlling comprises of modifying a code channel to pilot channel power ratio associated with a traffic channel.

In a related art dealing with centralized power control, Tiedemann teaches of wherein said controlling comprises of modifying a code channel to pilot channel power ratio associated with a traffic channel (page 12, lines 12 – 35).

It would have been obvious to one skilled in the art at the time of invention to have included into Palenius and Park's power control system, Tiedemann's ratio, for the purposes of optimizing and improving the performance of a CDMA system in respect to various facets (multi-carrier environments, soft handover, ect), as taught by Tiedemann.

Regarding claims 10 and 25, Palenius in view of Park and Tiedemann teach all the claimed limitations as recited in claims 9 and 24. Tiedemann further teaches of comprising: using said modified code channel to pilot channel power ratio to control power level of said dedicated control channel (Figure 3 and page 12, lines 12 – 37 and page 13, lines 1 – 20).

8. Claims 6, 7, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palenius (Palenius, US Patent No. 6,512,750) in view of Park et al. (Park, US Patent No. 6,480,481) as applied to claims, and further in view of Ziv et al (Ziv, US Patent No. 5,884,187).

Regarding claims 6 and 21, Palenius in view of Park teach all the claimed limitations as recited in claims 1 and 16. Both Palenius in view of Park further teach of wherein said communication channel is between a mobile station and a base station (Palenius: Figure 3 and Park: column 23, lines 10 – 30).

Palenius in view of Park do not specifically teach of wherein said controlling comprises: adjusting a parameter of a power control outer loop at said base station, wherein said power control outer loop is operating to control power level of data transmissions during at least one of said data frame transmissions from said mobile station (though Park does note control with SIR as a criteria).

In a related art dealing with power control, Ziv teaches of wherein said communication channel is between a mobile station and a base station, wherein said controlling comprises: adjusting a parameter of a power control outer loop at said base station, wherein said power control outer loop is operating to control power level (starting column 14, line 42 and ending column 15, line 20).

It would have been obvious to one skilled in the art at the time of invention to have included into Palenius and Park's power control system, Ziv's control mechanism, for the purposes of centralizing power control and thus simplify the traditional power control mechanism, as taught by Ziv.

Regarding claims 7 and 22, Palenius in view of Park teach all the claimed limitations as

recited in claims 1 and 16. Both Palenius in view of Park further teach of wherein said communication channel is between a mobile station and a base station (Palenius: Figure 3 and Park: column 23, lines 10 – 30).

Palenius in view of Park do not specifically teach of wherein said controlling comprises: adjusting a frame error rate set point, at said mobile station, of a power control outer loop, wherein said power control outer loop is operating to control power level of data transmissions during at least one of said data frame transmissions from said mobile station.

In a related art dealing with power control, Ziv teaches of wherein said communication channel is between a mobile station and a base station, wherein said controlling comprises: adjusting a frame error rate set point, at said mobile station, of a power control outer loop, wherein said power control outer loop is operating to control power level (starting column 14, line 42 and ending column 15, line 20).

It would have been obvious to one skilled in the art at the time of invention to have included into Palenius and Park's power control system, Ziv's control mechanism, for the purposes of centralizing power control and thus simplify the traditional power control mechanism, as taught by Ziv.

9. Claims 11, 12, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palenius (Palenius, US Patent No. 6,512,750) in view of Park et al. (Park, US Patent No. 6,480,481) as applied to claims 1 and 16, and further in view of Kim et al. (Kim, US Patent No. 6,304,562).

Regarding claims 11 and 26, Palenius in view of Park teach all the claimed limitations as

recited in claims 1 and 16. Palenius in view of Park do not specifically teach of wherein said controlling comprises of adjusting a target power level of a pilot channel for controlling power level of said communication channel.

In a related art dealing with power control in spread spectrum communications system, Kim teaches of wherein said controlling comprises of adjusting a target power level of a pilot channel for controlling power level of said communication channel (column 3, lines 15 – 29).

It would have been obvious to one skilled in the art at the time of invention to have included into Palenius and Park's power control system, Kim's pilot strength setting system, for the purposes of the reduction of interference (and thereby increasing capacity) as taught by Kim.

Regarding claims 12 and 27, Palenius in view of Park and Kim, teach all the claimed limitations as recited in claims 11 and 26. Kim further teaches of wherein said communication channel is between a mobile station and a base station, further comprising: communicating said adjusted target power level of said pilot channel to said mobile station (column 3, lines 15 – 29).

10. Claims 13 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palenius (Palenius, US Patent No. 6,512,750) in view of Park et al. (Park, US Patent No. 6,480,481) and Kim et al. (Kim, US Patent No. 6,304,562) as applied to claims, and further in view of Lavean (Lavean, US Patent No. 5,943,331).

Regarding claims 13 and 28, Palenius in view of Park and Kim, teach all the claimed limitations as recited in claims 11 and 26. Palenius in view of Park and Kim do not specifically teach of wherein said communication channel is between a mobile station and a base station, wherein said pilot channel originates from said mobile station.

In a related art dealing with spread spectrum communications systems, Lavean teaches of wherein said communication channel is between a mobile station and a base station, wherein said pilot channel originates from said mobile station (column 4, lines 29 –34).

It would have been obvious to one skilled in the art at the time of invention to have included into Palenius, Park, and Kim's power control system, Lavean's reverse pilot, for the purposes of achieving orthgonality at base stations (and hence mitigating interference seen by the bases station) as taught by Lavean.

11. Claims 14, 15, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palenius (Palenius, US Patent No. 6,512,750) in view of Park et al. (Park, US Patent No. 6,480,481) as applied to claims, and further in view of Kumar et al. (Kumar, US Patent No. 6,434,367).

Regarding claims 14 and 29, Palenius in view of Park, teach all the claimed limitations as recited in claims 1 and 16. Palenius in view of Park do not specifically teach of wherein said controlling comprises of adjusting a power level of a power control sub-channel.

In a related art dealing with power control in a spread spectrum system, Kumar teaches of wherein said controlling comprises of adjusting a power level of a power control sub-channel (column 6,lines 33 –46).

It would have been obvious to one skilled in the art at the time of invention to have included into Palenius and Park' s power control system, Kumar's power control sub-channel, for the purposes of reduction of interference while reducing the reactivation time (for mobiles transitioning from different states, as experienced in intermittent communications), as taught by Kumar.

Regarding claims 15 and 30, Palenius in view of Park and Kumar teach all the claimed limitations as recited in claims 14 and 29. Kumar further teaches of wherein said communication channel is between a mobile station and a base station, wherein said power control sub-channel originates from said base station (column 6, lines 31 –35).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanmay S Lele whose telephone number is (703) 305-3462. The examiner can normally be reached on 9 - 6:30 PM Monday – Thursdays and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A. Maung can be reached on (703) 308-7745. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Tanmay S Lele
Examiner
Art Unit 2684

NAY MAUNG
SUPERVISORY PATENT EXAMINER

tsl
January 12, 2004